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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/199,655	11/25/1998	RICHARD A. MATHIES.	71180-024827	3941

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11/27/2001

PILLSBURY MADISON & SUTRO  
725 SOUTH FIGUEROA STREET SUITE 1200  
LOS ANGELES, CA 900175443

EXAMINER

BEX, PATRICIA K

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 11/27/2001

18

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/199,655

Applicant(s)

MATHIES ET AL.

Examiner

P. Kathryn Bex

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6 and 9-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. The cancellation of claims 36-40 is acknowledged and has been entered into the record.

#### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 1-3, 6, 9-13 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1, lines 15-17, now recites "whereby solutions are deposited and removed from a container having at least two capillaries". Again, this introduces an additional or third container in the liquid-handling system which was not described within the instant specification. On page 13, lines 12-20 specification does support "a two, or more capillary per reservoir system can be used, for simultaneous removal of loading from a capillary array...whereby one capillary is used to vacuum remove the undesired liquids and the second capillary is used to deposit the new liquids", see Fig. 7. However, as previously pointed in the Office action, paper no. 8 in reference to claim 35, there is no mention of an "additional" or third container.

Claim 6, line 3-4, recite "wherein at least one capillary tube transfers liquid between said plurality of first and second containers". This limitation is not supported by the instant specification. The specification does support a *manifold* having a set of reservoirs or containers, see page 8, lines 24-27.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-3, 6, 9-13, 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 13-14, The limitation, "wherein the pressure-altering device applies a pressure differential that causes liquid contained in either the first container of the second container to be transferred through the capillary tube"; is unclear as to what *structural* limitation is intended because it recites an *intended use*. Applicant is reminded that process limitations are not accorded patentable weight in a claim drawn to an apparatus. Additionally, Examiner believes the phrase "in either the first container of the second container" should be changed into the alternate form --in either the first container *or* the second container".

Lines 15-17, recites "whereby solutions are deposited and removed from a container having at least two capillaries, including the deposit of two or more solutions to be mixed and removal of a resulting mixture". This new limitation creates confusion and uncertainty as to which "container", i.e. the first or second container, has at least two capillaries. Additionally, the newly added reference to "two capillaries" is confusing since the claim was also amended to state that the first container has "a capillary tube." It is unclear how the new "whereby" clause would be accomplished by the structure as claimed. Moreover, it has been held that the functional "whereby" statement does not define any *structure* and accordingly can not serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957). Additionally, process limitations are not accorded patentable weight in a claim drawn to an apparatus.

Line 7, the term "near" is a relative term which renders the claim indefinite. The term "near" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "near" renders the distance of the first end of the tube from the bottom of the first container indefinite.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-3, 6, 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. (WO 97/34138).

Wilson teaches a system for the bi-directional (page 6, line 19-23) transferring of liquid comprising; a first container comprising a plurality of reservoirs 70, a housing 30 encasing the first container in a pressure-tight manner. Wilson teach a plurality of capillary tubes 34 having a

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predetermined length and diameter, wherein a first end 36 of the tube is positioned near the bottom of at least one of the reservoirs of the first container and the distal end 38 of the capillary extends at or above a plurality of destination wells 21 of a second container. Moreover, the liquid contained in the first container is transferred through the capillary tube to the second container when a pressure gradient or difference is applied via an electric pump, pressurized gas cylinder or any other source of gas pressure (page 5, line 29- page 14, line 22). Wilson does not explicitly teach a computer-controlled pressure-altering device attached to the housing in a pressure-tight manner, that changes the pressure within the housing relative to the pressure outside the housing. However, such a control means is considered conventional in the art and usually required in large-scale liquid transfer systems. With respect to the newly claimed whereby clause, the system of Wilson would have been fully capable of performing the same function.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included in the liquid transfer apparatus of Wilson, a computer-controlled pressure-altering device in order to allow for the transfer the liquid samples automatically and to ensure that a correct pressure is generated and therefore an accurate amount of liquid sample dispensed. Further, it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

9. Claims 1-3, 6, 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Citrin (USP 4,342,407).

Citrin teach a liquid transfer device comprising a first container 24 comprising a plurality of reservoirs 25, a housing 27 encasing the first container in a pressure-tight manner. Citrin teach a plurality of capillary tubes 41, 48 having a predetermined length and diameter, wherein a first end of the tube is positioned near the bottom of at least one of the reservoirs of the first container (Fig. 1) and the distal end of the capillary extends at or above a plurality of destination wells of a second container 50. Moreover, the liquid contained in the first container is transferred through the capillary tube to the second container when a pressure gradient or difference is applied via pressurized air cylinder (column 2 lines 33-36). Citrin does not explicitly teach a computer-controlled pressure-altering device attached to the housing in a pressure-tight manner, that changes the pressure within the housing relative to the pressure outside the housing. However, such a control means is considered conventional in the art and usually required in large-scale liquid transfer systems. With respect to the newly claimed whereby clause, the system of Citrin would have been fully capable of performing the same function.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included in the liquid transfer apparatus of Citrin, a computer-controlled pressure-altering device in order to allow for the transfer the liquid samples automatically and to ensure that a correct pressure is generated and therefore an accurate amount of liquid sample dispensed. Further, it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

### ***Response to Arguments***

10. Applicant's arguments filed August 24, 2001 have been fully considered but they

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are not persuasive. Regarding the interview November 28, 2000, Examiner agreed to *consider* the incorporation of claim 14 into the independent claim, however upon closer inspection of the application, Examiner does not believe that newly proposed "whereby" clause in claim 1 would be accomplished by the structure as claimed. In response to the previous rejection of claim 6 under 35 U.S.C first paragraph, Applicant argues that claim 6 is supported in light of the amendment made to claim 1. Examiner points out that limitations must appear in specification or claims as originally filed, not amendments. Regarding the rejection of claim 1, under 35 U.S.C. 112, second paragraph the term "near" is a relative term which renders the claim indefinite. The term "near" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. One cannot glean from the term "near" any distance from the bottom of the container.

Examiner notes that Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

### ***Conclusion***

11. No claims allowed.
12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of



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the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Bex whose telephone number is (703) 306-5697. The examiner can normally be reached on Mondays-Thursdays from 6:00 am to 3:30 pm EST.

The fax number for the organization where this application or proceeding is assigned is (703) 305-7718 for official papers prior to mailing of a Final Office Action. For official papers after mailing of a Final Office Action, use fax number (703) 305-3599. For unofficial or draft papers use fax number (703) 305-7719. Please label all faxes as official or unofficial. The above fax numbers will allow the paper to be forwarded to the examiner in a timely manner.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.



P. Kathryn Bex  
Patent Examiner  
Group Art Unit 1743  
November 5, 2001



Supervisory Patent Examiner  
Technology Center 1700